

BIOLOGICAL FLUID SAMPLING AND ANALYTE MEASUREMENT DEVICES AND METHODS

ABSTRACT OF THE DISCLOSURE

[0072] A device for sampling a biological fluid and measuring a target analyte within the biological fluid is provided. The device has at least one micro-piercing member used to penetrate the skin to a selected depth and access biological fluid, a sampling means and a measuring means. The sampling means comprises a fluid transfer medium, such as a hydrophilic porous material, by which sampled biological fluid is transferred from the micro-piercing member to the measuring means. The measuring means includes an electrochemical cell having at least one porous electrode and, typically, a reagent material, where the electrochemical cell is configured so as to make an electrochemical measurement of a target analyte in accessed biological fluid present therein. Methods of sampling biological fluids within the skin and measuring the sampled fluids are also provided, as well as kits comprising one or more of the inventive devices.